

**RAW SEQUENCE LISTING***Re-run*

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/520,741  
Source: IFW  
Date Processed by STIC: 4/14/06

# ***ENTERED***

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*Re-run*

IFWP

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,741

DATE: 10/03/2006

TIME: 08:32:47

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10032006\J520741.raw

3 <110> APPLICANT: Sema ApS  
4 Albrechtsen, Morten  
5 Christensen, Claus  
6 Lukanidin, Eugene  
7 Olesen, Ole  
9 <120> TITLE OF INVENTION: Use of compounds capable of inhibiting the proteolytic  
processing of  
10 semaphorins for prevention, treatment, diagnosis and prognosis of an invasive  
11 disease  
13 <130> FILE REFERENCE: P682 PC00  
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/520,741  
C--> 15 <141> CURRENT FILING DATE: 2005-01-11  
15 <150> PRIOR APPLICATION NUMBER: PCT/DK03/00483  
16 <151> PRIOR FILING DATE: 2003-07-11  
18 <160> NUMBER OF SEQ ID NOS: 30  
20 <170> SOFTWARE: PatentIn version 3.1  
22 <210> SEQ ID NO: 1  
23 <211> LENGTH: 775  
24 <212> TYPE: PRT  
25 <213> ORGANISM: Mus sp.  
27 <400> SEQUENCE: 1  
29 Met Ala Pro Ala Gly His Ile Leu Thr Leu Leu Leu Trp Gly His Leu  
30 1 5 10 15  
33 Leu Glu Leu Trp Thr Pro Gly His Ser Ala Asn Pro Ser Tyr Pro Arg  
34 20 25 30  
37 Leu Arg Leu Ser His Lys Glu Leu Leu Glu Leu Asn Arg Thr Ser Ile  
38 35 40 45  
41 Phe Gln Ser Pro Leu Gly Phe Leu Asp Leu His Thr Met Leu Leu Asp  
42 50 55 60  
45 Glu Tyr Gln Glu Arg Leu Phe Val Gly Gly Arg Asp Leu Val Tyr Ser  
46 65 70 75 80  
49 Leu Asn Leu Glu Arg Val Ser Asp Gly Tyr Arg Glu Ile Tyr Trp Pro  
50 85 90 95  
53 Ser Thr Ala Val Lys Val Glu Glu Cys Ile Met Lys Gly Lys Asp Ala  
54 100 105 110  
57 Asn Glu Cys Ala Asn Tyr Ile Arg Val Leu His His Tyr Asn Arg Thr  
58 115 120 125  
61 His Leu Leu Thr Cys Ala Thr Gly Ala Phe Asp Pro His Cys Ala Phe  
62 130 135 140  
65 Ile Arg Val Gly His His Ser Glu Glu Pro Leu Phe His Leu Glu Ser  
66 145 150 155 160  
69 His Arg Ser Glu Arg Gly Arg Gly Arg Cys Pro Phe Asp Pro Asn Ser  
70 165 170 175  
73 Ser Phe Val Ser Thr Leu Val Gly Asn Glu Leu Phe Ala Gly Leu Tyr

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74      180      185      190
77 Ser Asp Tyr Trp Gly Arg Asp Ser Ala Ile Phe Arg Ser Met Gly Lys
78      195      200      205
81 Leu Gly His Ile Arg Thr Glu His Asp Asp Glu Arg Leu Leu Lys Glu
82      210      215      220
85 Pro Lys Phe Val Gly Ser Tyr Met Ile Pro Asp Asn Glu Asp Arg Asp
86 225      230      235      240
89 Asp Asn Lys Met Tyr Phe Phe Phe Thr Glu Lys Ala Leu Glu Ala Glu
90      245      250      255
93 Asn Asn Ala His Thr Ile Tyr Thr Arg Val Gly Arg Leu Cys Val Asn
94      260      265      270
97 Asp Met Gly Gly Gln Arg Ile Leu Val Asn Lys Trp Ser Thr Phe Leu
98      275      280      285
101 Lys Ala Arg Leu Val Cys Ser Val Pro Gly Met Asn Gly Ile Asp Thr
102      290      295      300
105 Tyr Phe Asp Glu Leu Glu Asp Val Phe Leu Leu Pro Thr Arg Asp Pro
106 305      310      315      320
109 Lys Asn Pro Val Ile Phe Gly Leu Phe Asn Thr Thr Ser Asn Ile Phe
110      325      330      335
113 Arg Gly His Ala Val Cys Val Tyr His Met Ser Ser Ile Arg Glu Ala
114      340      345      350
117 Phe Asn Gly Pro Tyr Ala His Lys Glu Gly Pro Glu Tyr His Trp Ser
118      355      360      365
121 Leu Tyr Glu Gly Lys Val Pro Tyr Pro Arg Pro Gly Ser Cys Ala Ser
122      370      375      380
125 Lys Val Asn Gly Gly Lys Tyr Gly Thr Thr Lys Asp Tyr Pro Asp Asp
126 385      390      395      400
129 Ala Ile Arg Phe Ala Arg Ile Asp Pro Leu Met Tyr Gln Pro Ile Lys
130      405      410      415
133 Pro Val His Lys Lys Pro Ile Leu Val Lys Thr Asp Gly Lys Tyr Asn
134      420      425      430
137 Leu Arg Gln Leu Ala Val Asp Arg Val Glu Ala Glu Asp Gly Gln Tyr
138      435      440      445
141 Asp Val Leu Phe Ile Gly Thr Asp Thr Gly Ile Val Leu Lys Val Ile
142      450      455      460
145 Thr Ile Tyr Asn Gln Glu Thr Glu Trp Met Glu Glu Val Ile Leu Glu
146 465      470      475      480
149 Glu Leu Gln Ile Phe Lys Asp Pro Ala Pro Ile Ile Ser Met Glu Ile
150      485      490      495
153 Ser Ser Lys Arg Gln Gln Leu Tyr Ile Gly Ser Ala Ser Ala Val Ala
154      500      505      510
157 Gln Val Arg Phe His His Cys Asp Met Tyr Gly Ser Ala Cys Ala Asp
158      515      520      525
161 Cys Cys Leu Ala Arg Asp Pro Tyr Cys Ala Trp Asp Gly Ile Ser Cys
162      530      535      540
165 Ser Arg Tyr Tyr Pro Thr Gly Ala His Ala Lys Arg Arg Phe Arg Arg
166 545      550      555      560
169 Gln Asp Val Arg His Gly Asn Ala Ala Gln Gln Cys Phe Gly Gln Gln
170      565      570      575

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173 Phe Val Gly Asp Ala Leu Asp Arg Thr Glu Glu Arg Leu Ala Tyr Gly  
174 580 585 590  
177 Ile Glu Ser Asn Ser Thr Leu Leu Glu Cys Thr Pro Arg Ser Leu Gln  
178 595 600 605  
181 Ala Lys Val Ile Trp Phe Tyr Gln Lys Gly Arg Asp Val Arg Lys Glu  
182 610 615 620  
185 Glu Val Lys Thr Asp Asp Arg Val Val Lys Met Asp Leu Gly Leu Leu  
186 625 630 635 640  
189 Phe Leu Arg Val Arg Lys Ser Asp Ala Gly Thr Tyr Phe Cys Gln Thr  
190 645 650 655  
193 Val Glu His Asn Phe Val His Thr Val Arg Lys Ile Thr Leu Glu Val  
194 660 665 670  
197 Val Glu Glu His Lys Val Glu Gly Met Phe His Lys Asp His Glu Glu  
198 675 680 685  
201 Glu Arg His His Lys Met Pro Cys Pro Pro Leu Ser Gly Met Ser Gln  
202 690 695 700  
205 Gly Thr Lys Pro Trp Tyr Lys Glu Phe Leu Gln Leu Ile Gly Tyr Ser  
206 705 710 715 720  
209 Asn Phe Gln Arg Val Glu Glu Tyr Cys Glu Lys Val Trp Cys Thr Asp  
210 725 730 735  
213 Lys Lys Arg Lys Lys Leu Lys Met Ser Pro Ser Lys Trp Lys Tyr Ala  
214 740 745 750  
217 Asn Pro Gln Glu Lys Arg Leu Arg Ser Lys Ala Glu His Phe Arg Leu  
218 755 760 765  
221 Pro Arg His Thr Leu Leu Ser  
222 770 775  
225 <210> SEQ ID NO: 2  
226 <211> LENGTH: 775  
227 <212> TYPE: PRT  
228 <213> ORGANISM: Mus sp.  
230 <400> SEQUENCE: 2  
232 Met Ala Ser Ala Gly His Ile Ile Thr Leu Leu Leu Trp Gly Tyr Leu  
233 1 5 10 15  
236 Leu Glu Leu Trp Thr Gly Gly His Thr Ala Asp Thr Thr His Pro Arg  
237 20 25 30  
240 Leu Arg Leu Ser His Lys Glu Leu Leu Asn Leu Asn Arg Thr Ser Ile  
241 35 40 45  
244 Phe His Ser Pro Phe Gly Phe Leu Asp Leu His Thr Met Leu Leu Asp  
245 50 55 60  
248 Glu Tyr Gln Glu Arg Leu Phe Val Gly Gly Arg Asp Leu Val Tyr Ser  
249 65 70 75 80  
252 Leu Ser Leu Glu Arg Ile Ser Asp Gly Tyr Lys Glu Ile His Trp Pro  
253 85 90 95  
256 Ser Thr Ala Leu Lys Met Glu Glu Cys Ile Met Lys Gly Lys Asp Ala  
257 100 105 110  
260 Gly Glu Cys Ala Asn Tyr Val Arg Val Leu His His Tyr Asn Arg Thr  
261 115 120 125  
264 His Leu Leu Thr Cys Gly Thr Gly Ala Phe Asp Pro Val Cys Ala Phe  
265 130 135 140

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Input Set : A:\PTO.AMC.txt

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268 Ile Arg Val Gly Tyr His Leu Glu Asp Pro Leu Phe His Leu Glu Ser  
269 145 150 155 160  
272 Pro Arg Ser Glu Arg Gly Arg Gly Arg Cys Pro Phe Asp Pro Ser Ser  
273 165 170 175  
276 Ser Phe Ile Ser Thr Leu Ile Gly Ser Glu Leu Phe Ala Gly Leu Tyr  
277 180 185 190  
280 Ser Asp Tyr Trp Ser Arg Asp Ala Ala Ile Phe Arg Ser Met Gly Arg  
281 195 200 205  
284 Leu Ala His Ile Arg Thr Glu His Asp Asp Glu Arg Leu Leu Lys Glu  
285 210 215 220  
288 Pro Lys Phe Val Gly Ser Tyr Met Ile Pro Asp Asn Glu Asp Arg Asp  
289 225 230 235 240  
292 Asp Asn Lys Val Tyr Phe Phe Phe Thr Glu Lys Ala Leu Glu Ala Glu  
293 245 250 255  
296 Asn Asn Ala His Ala Ile Tyr Thr Arg Val Gly Arg Leu Cys Val Asn  
297 260 265 270  
300 Asp Val Gly Gly Gln Arg Ile Leu Val Asn Lys Trp Ser Thr Phe Leu  
301 275 280 285  
304 Lys Ala Arg Leu Val Cys Ser Val Pro Gly Met Asn Gly Ile Asp Thr  
305 290 295 300  
308 Tyr Phe Asp Glu Leu Glu Asp Val Phe Leu Leu Pro Thr Arg Asp His  
309 305 310 315 320  
312 Lys Asn Pro Val Ile Phe Gly Leu Phe Asn Thr Thr Ser Asn Ile Phe  
313 325 330 335  
316 Arg Gly His Ala Ile Cys Val Tyr His Met Ser Ser Ile Arg Ala Ala  
317 340 345 350  
320 Phe Asn Gly Pro Tyr Ala His Lys Glu Gly Pro Glu Tyr His Trp Ser  
321 355 360 365  
324 Val Tyr Glu Gly Lys Val Pro Tyr Pro Arg Pro Gly Ser Cys Ala Ser  
325 370 375 380  
328 Lys Val Asn Gly Gly Arg Tyr Gly Thr Thr Lys Asp Tyr Pro Asp Asp  
329 385 390 395 400  
332 Ala Ile Arg Phe Ala Arg Ser His Pro Leu Met Tyr Gln Ala Ile Lys  
333 405 410 415  
336 Pro Ala His Lys Lys Pro Ile Leu Val Lys Thr Asp Gly Lys Tyr Asn  
337 420 425 430  
340 Leu Lys Gln Ile Ala Val Asp Arg Val Glu Ala Glu Asp Gly Gln Tyr  
341 435 440 445  
344 Asp Val Leu Phe Ile Gly Thr Asp Asn Gly Ile Val Leu Lys Val Ile  
345 450 455 460  
348 Thr Ile Tyr Asn Gln Glu Met Glu Ser Met Glu Glu Val Ile Leu Glu  
349 465 470 475 480  
352 Glu Leu Gln Ile Phe Lys Asp Pro Val Pro Ile Ile Ser Met Glu Ile  
353 485 490 495  
356 Ser Ser Lys Arg Gln Gln Leu Tyr Ile Gly Ser Ala Ser Ala Val Ala  
357 500 505 510  
360 Gln Val Arg Phe His His Cys Asp Met Tyr Gly Ser Ala Cys Ala Asp  
361 515 520 525  
364 Cys Cys Leu Ala Arg Asp Pro Tyr Cys Ala Trp Asp Gly Ile Ser Cys

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10032006\J520741.raw

365 530 535 540  
368 Ser Arg Tyr Tyr Pro Thr Gly Thr His Ala Lys Arg Arg Phe Arg Arg  
369 545 550 555 560  
372 Gln Asp Val Arg His Gly Asn Ala Ala Gln Gln Cys Phe Gly Gln Gln  
373 565 570 575  
376 Phe Val Gly Asp Ala Leu Asp Lys Thr Glu Glu His Leu Ala Tyr Gly  
377 580 585 590  
380 Ile Glu Asn Asn Ser Thr Leu Leu Glu Cys Thr Pro Arg Ser Leu Gln  
381 595 600 605  
384 Ala Lys Val Ile Trp Phe Val Gln Lys Gly Arg Glu Thr Arg Lys Glu  
385 610 615 620  
388 Glu Val Lys Thr Asp Asp Arg Val Val Lys Met Asp Leu Gly Leu Leu  
389 625 630 635 640  
392 Phe Leu Arg Leu His Lys Ser Asp Ala Gly Thr Tyr Phe Cys Gln Thr  
393 645 650 655  
396 Val Glu His Ser Phe Val His Thr Val Arg Lys Ile Thr Leu Glu Val  
397 660 665 670  
400 Val Glu Glu Glu Lys Val Glu Asp Met Phe Asn Lys Asp Asp Glu Glu  
401 675 680 685  
404 Asp Arg His His Arg Met Pro Cys Pro Ala Gln Ser Ser Ile Ser Gln  
405 690 695 700  
408 Gly Ala Lys Pro Trp Tyr Lys Glu Phe Leu Gln Leu Ile Gly Tyr Ser  
409 705 710 715 720  
412 Asn Phe Gln Arg Val Glu Glu Tyr Cys Glu Lys Val Trp Cys Thr Asp  
413 725 730 735  
416 Arg Lys Arg Lys Lys Leu Lys Met Ser Pro Ser Lys Trp Lys Tyr Ala  
417 740 745 750  
420 Asn Pro Gln Glu Lys Lys Leu Arg Ser Lys Pro Glu His Tyr Arg Leu  
421 755 760 765  
424 Pro Arg His Thr Leu Asp Ser  
425 770 775  
428 <210> SEQ ID NO: 3  
429 <211> LENGTH: 560  
430 <212> TYPE: PRT  
431 <213> ORGANISM: Mus sp.  
433 <400> SEQUENCE: 3  
435 Met Ala Pro Ala Gly His Ile Leu Thr Leu Leu Leu Trp Gly His Leu  
436 1 5 10 15  
439 Leu Glu Leu Trp Thr Pro Gly His Ser Ala Asn Pro Ser Tyr Pro Arg  
440 20 25 30  
443 Leu Arg Leu Ser His Lys Glu Leu Glu Leu Asn Arg Thr Ser Ile  
444 35 40 45  
447 Phe Gln Ser Pro Leu Gly Phe Leu Asp Leu His Thr Met Leu Leu Asp  
448 50 55 60  
451 Glu Tyr Gln Glu Arg Leu Phe Val Gly Gly Arg Asp Leu Val Tyr Ser  
452 65 70 75 80  
455 Leu Asn Leu Glu Arg Val Ser Asp Gly Tyr Arg Glu Ile Tyr Trp Pro  
456 85 90 95  
459 Ser Thr Ala Val Lys Val Glu Glu Cys Ile Met Lys Gly Lys Asp Ala

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/520,741

DATE: 10/03/2006

TIME: 08:32:48

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\10032006\J520741.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No  
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date